

Notice of Allowability

Application No.

09/665,694

Examiner

Roy M. Punnoose

Applicant(s)

MATSUMOTO ET AL.

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendments received on 12/23/2003.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 20 September 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 11/12/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-20 are allowable.

Claim 1 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious a near-field optical probe, comprising a metallic scatterer with a localized plasmon that is excited inside of said metallic scatter, in combination with the rest of the limitations of said claim.

2. Claims 8-16 are allowable because they are dependent on independent claim 1 or an intermediate claim.

3. Claim 2 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious a metallic scatterer fabricated on a substrate in a contour of a planar ellipse having a major axis, a minor axis, and thickness, the major axis, the minor axis, and the thickness being equal to or less than a wavelength of light.

4. Claim 3 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious a metallic scatterer fabricated on a substrate in a contour of a triangle having a vertex with a radius of curvature and thickness, the radius of curvature and the thickness being equal to or less than a wavelength of light.

5. Claim 5 is allowable because it is dependent on independent claim 3.

6. Claim 4 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious a metallic scatterer fabricated on a substrate in a contour of a

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triangle having a first vertex, second vertex, and a third vertex, the first vertex having a radius of curvature less than a radius of curvature of each of the second and third vertices.

7. Claim 6 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious a near-field optical probe, comprising a substrate on which a metallic film having a pointed tip end and a metallic film having an arbitrary contour are formed for generating a plasmon resonance, in which an interval between the pointed tip end metallic film and the arbitrarily contoured metallic film is equal to or less than 50 nm.

8. Claim 7 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious a near-field optical probe comprising a substrate on which two metallic films each having a pointed tip end are formed for generating a plasmon resonance, in which an interval between the pointed tip ends is equal to or less than 50 nm.

9. Claim 17 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious a near-field optical probe comprising a metallic film having a pointed tip end in a contour of a planar ellipse or a triangle on a side surface or an inclined side surface of a substrate, said pointed tip end being brought into contact with a surface of a sample.

10. Claims 18-20 are allowable because they are dependent on independent claim 17 or an intermediate claim.

11. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Examiner Roy M. Punnoose** whose telephone number is **571-272-2427**. The examiner can normally be reached on 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the applicant can reach his **Supervisory Patent Examiner, Frank G. Font**, at 571-272-2415.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a **general nature** or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(571) 272-1585**.

Roy M. Punnoose
Patent Examiner
Art Unit 2877
March 07, 2004



Mr. Frank G. Font
Supervisory Patent Examiner